REMARKS

The above amendment added no new matter and is merely made to more accurately describe and claim the invention.

It is respectfully submitted that the application is now in condition for allowance, which allowance is respectfully requested.

The Commissioner is authorized to charge any fee or credit any overpayment in connection with this communication to our Deposit Account No. 11-1449.

Respectfully submitted,

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Dated: April 24, 2002

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231 on April 24, 2002.

Connie Herty

VERSION WITH MARKINGS TO SHOW CHANGES MADE

SPECIFICATION:

Page 9, Lines 36-33:

Figure 3 is a photograph demonstrating the specificity of rabbit antiserum to ebaf by Western blot analysis; in each lane, 10μg of extracted endometrial proteins was resolved in a 15% gel by SDS-PAGE and then subjected to Western blot analysis; the blot was probed with the antiserum alone (left lane) and with the antiserum-preincubated with a 100 molar excess if the CASDGALVPRRLQHRP-amide (Seq. ID. No. 3);

Page 16, Lines 1-7:

lane 1: molecular weight markers. 75 μg of placental proteins (lane 2), and cytosolic proteins of late proliferative (lanes 3-4) and the late secretory (lanes 5-7) endometria were subjected to Western blot analysis using the affinity purified rabbit antiserum against a peptide (CASDGALVPRRLQHRP-amide) (Seq. ID. No. 3) at the C terminal domain of the ebaf;

Page 17, Lines 1-6:

rabbit anti-serum to ebaf by Western blot analysis; A: in each lane, 10 micrograms of extracted endometrial proteins was resolved in a 15% gel by SDS-PAGE and then subjected to Western blot analysis; the blot was probed with the anti-serum alone (left lane) and with the antiserum-preincubated with a 100 molar excess of the CASDGALVPRRLQHRP-amide (Seq. ID. No. 3);

Page 27, Lines 20-27:

One additional embodiment of the present invention is the development of an antisera for *ebaf*. An antibody with specificity is useful in determining the presence of *ebaf*, or an ebaf variant, in a sample. By variant, it is meant that an variant which is functionally relevant. Further, the peptide CASDGALVPRRLQHRP-amide (Seq. ID. No. 3), as demonstrated in the examples below, has been shown to be effective in the development of such an antisera.

Page 47, Lines 11-22:

The polyclonal rabbit antibody raised against a synthetic peptide at the C terminal domain of the ebaf reacted with a major 41 kDa protein in the placenta as well as the endometrium. In the case of lefty, which is the mouse homologue of the human ebaf, the expression of the protein in 293T cells led to formation of a non-secretory, 42 kDa protein which is the size of the pre-pro-protein (Meno *et al*, 1996). The predicted size of the pre-pro-protein of the ebaf is 41 kDa. The members of the TGF-β super family are synthesized as pre-pro-proteins which are cleaved at RXXR (Seq. ID. No. 2) sites to release the mature form of the protein. The predicted protein of ebaf exhibits two such RXXR sites (Seq. ID. No. 2) which are located at amino acid residues of 73-76 and 131-134 respectively (Kothapalli *et al*, 1997).

Page 48, Lines 1-2:

to cleavage at the first and second RXXR (Seq. ID. No. 2) sites respectively (Kothapalli *et al*, 1997).

Page 55, Lines 1-4:

expected to be secreted (Table 2). To detect such proteins in human endometrium, an antiserum was raised against the peptide CASDGALVPRRLQHRP-amide (Seq. ID. No. 3) at the COOH terminal of the ebaf protein.

Page 62, Lines 14-21:

PCR was carried out as described using the 5' primer (B2P9): TCAGCGAGGTGCCCGTACT (Seq. ID. No. 4) and 3' primer (B2P1): AGTTCTTAGAGCTGAAGCC (Seq. ID. No. 5). Briefly, 1 μg of reverse transcribed RNA was amplified with 0.5-1 μM of each of the 5' and 3' primers specific for *ebaf* in a 50 μl reaction volume containing 1.25 U AmpliTaq DNA polymerase, 1.25 mM $MgCl_2$, 20 μM of each of dATP, dCTP, dGTP, dTTP, 10 mM Tris-HCl (pH 8.3), 50 mM KCl, and sterile distilled water.

Page 65, Lines 22-26:

Premature Expression Of ebaf protein In The Endometria Of Infertile Patients: To localize the ebaf protein in endometrium, two polyclonal rabbit antisera were raised against a sequence (CASDGALVPRRLQHRP) (Seq. ID. No. 3) that resides at the carboxy terminal end of the express *ebaf*.

Page 71, Lines 8-13:

A monoclonal and rabbit antisera were raised against the peptide CASDGALVPRRLQHRP-amide (Seq. ID. No. 3) at the COOH terminal (Tabibzadeh et al, 1998) and to acetyl-DRADMEKLVIPAC peptide (Seq. ID. No. 6) at the NH2 terminal of the *ebaf* (Figures 25-26). Rabbit antiserum to CASDGALVPR RLQHRP-amide (Seq. ID. No. 3) was purified on a peptide column.

Please insert Sequence Listing after Page 81, after Table 7, of the Specification.